SECRET

50X1-HUM

ELECTRICITY SUPPLY FOR THE DISTRICTS OF SÖNDERJYLLAND, FYN, AND NORDJYLLAND (UP TO THE AARHUS-HOLSTEBRO LINE) 1943/1944

A report, dated 6 November 1943, by the German Armament Staff Denmark supports a request for priority rating for turbines, under production at the Allgemeine Elektrizitäts Gesellschaft (AEG) in Berlin for two Danish power plants, by giving the following factual information:

The supply of electricity for the districts of Sydjylland, Fyn, and Nordjylland (up to the Aarhus-Holstebro line) is transmitted from several collaborating electric power plants by means of three collecting lines (Sammelschiene):

1. the Vestjylland collecting line
2. the Ostjylland collecting line
3. the Fredericia-Odense

The collaborating power plants have a total installed capacity of 75,000 kilowatts, of which only 65,000 kilowatts are constantly available because of repairs, etc.

It is at present impossible to cover all needs with the available installations. The normal load for the winter of 1943/44 is anticipated to amount to 95,000 kilowatts. Power consumption by agricultural and industrial consumers has had to be restricted in order to ensure, at least to a certain degree, the supply for the winter of 1943/44. Agricultural consumers were subdivided into different groups, each of which is entitled to use motors for only 2 half-days per week, while industrial consumers were divided into 2 groups, one prohibited from connecting its installations to the power line between 0600 and 1200 hours, and the other, between 1400 and 2230 hours.

Since the consumption anticipated for the winter of 1944/45 amounts to 125,000 kilowatts (a figure which probably will be even higher because of the many Armed Forces construction programs now underway), the supply



SECRET

can be ensured only by the addition of new machine units. The following new units had been ordered from the AEG in Berlin: for the Apenrade electric power plant a 40,000 kilowatt turbine unit with a 40,000 kilovolt-ampere transformer (ordered in July 1942) and for the electric power plant Esbjerg an 18,000 kilowatt turbine (ordered in March 1943). Both orders should be delivered early enough to make installation by October 1944 possible and to avoid a breakdown of the power supply during the winter of 1944/45 in a region of Denmark, the agriculture and industry of which are important for Germany.

In a report, dated 8 December 1943, by the German Armament Staff Denmark, the following additional argument is made for the installation of new turbines at the electric power plants of Apenrade and Esbjerg and the request for priority ratings S and SS for the construction of these turbines.

The expansion of turbine installations is d e c i s i v e l y influenced by the necessity for saving diesel oil.

The attached table shows the total installed capacity of the Jylland collecting line.

According to this table, 50,400 kilowatts - 34% of the total installed capacity of 148,100 kilowatts are generated by diesel installations. Those diesel installations belong in almost equal share to the collecting line proper (23,400 kilowatts) and the regional central power plants (27,000 kilowatts), the distribution areas of which had to be connected with the collecting line because of the Diesel oil restrictions.

At present, only small diesel oil stocks are available, and these must be reserved for emergencies.

The turbine units, ordered for Apenrade and Esbjerg, with a capacity of 58,000 kilowatts would make up the deficit caused by the necessary shutdown of diesel units.

## Capacity of the Jylland Collecting Power Line, According to the Power Source, 1943

| Power Plant | Steam Kilowatts | Water Kilowatts | Diesel Kilowatts | Oil Consumption 1938/39 in Tons |
|---|---|---|---|---|
| Aarhus | 26,000 | | | |
| Gudenaa | | 3,300 | | |
| Odense | 12,000 | | 12,600 | |
| Kolding | 2,400 | 800 | | |
| Vejle | 2,800 | | 1,900 | 693 |
| Fredericia | | | 3,600 | 2,546 |
| Horsens | 3,100 | | 1,300 | 452 |
| Oddev | 4,700 | | | |
| Esbjerg | 8,400 | 1,600 | 4,000 | 4,182 |
| Sonderjylland Hojpvaerk | 33,000 | | | |
| Holstebro | | 600 | 1,700 | 928 |
| Herning | | | 2,200 | 1,190 |
| Ring Køb ing | | | 600 | 205 |
| Skern | | | 500 | 156 |
| Ølgod | | | 300 | 81 |
| Grunsted | | | 600 | 164 |
| Varde | | | 2,100 | 521 |
| Hadevelev | | 200 | 900 | 6 |
| Sønderburg | | | 1,200 | 203 |
| Tondern | | | 308 | 24 |
| Løgum Kloster | | | 200 | 37 |
| Toftlund | | | 300 | 60 |
| Kertemindo | | | 500 | 213 |
| Nyborg | | | 800 | 570 |
| Svendborg | | | 3,300 | 11,639 |
| Faaborg | | | 1,900 | 269 |
| Assens | | | 900 | 287 |
| Brende Møue | | | 500 | 123 |
| Bogense | | | 500 | 80 |
| Viby | | | 300 | 202 |
| Aaby | | | 500 | 278 |
| Fromlev | | | 1,000 | 354 |
| Silkeborg | | | 1,300 | 675 |
| Grenaa | | | 600 | 1 |
| Viborg | | | 600 | 364 |
| Skive | | | 1,700 | 521 |
| Horsen Environs | | 1,400 | | |
| Dørslund | | 400 | 1,300 | 176 |
| Kinge | | | 400 | 140 |
| | 89,400 | 8,300 | 50,400 | 20,788 |

TOTAL CAPACITY 148,100 kilowatts